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BEFORE THE ARIZONA CORPORATION COMM.

COMMISSIONERS

JEFF HATCH-MILLER, Chairman  
WILLIAM A. MUNDELL  
MIKE GLEASON  
KRISTIN K. MAYES  
GARY PIERCE

Arizona Corporation Commission

DOCKETED

FEB 21 2007

DOCKETED BY

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IN THE MATTER OF THE APPLICATION OF  
ARIZONA-AMERICAN WATER COMPANY,  
INC., AN ARIZONA CORPORATION, FOR  
APPROVALS ASSOCIATED WITH A  
PROPOSED TRANSACTION WITH MARICOPA  
COUNTY MUNICIPAL WATER  
CONSERVATION DISTRICT NUMBER ONE TO  
ALLOW THE CONSTRUCTION OF A SURFACE  
WATER TREATMENT FACILITY KNOWN AS  
THE WHITE TANKS PROJECT

DOCKET NO. W-01303A-05-0718

**ARIZONA-AMERICAN WATER  
COMPANY**

**NOTICE OF FILING TESTIMONY**

1 Arizona-American Water Company hereby files in the above-referenced matter testimony  
2 from the following witnesses:

- 3 • Joseph E. Gross;  
4 • Thomas M. Broderick; and  
5 • G. Troy Day.

6 RESPECTFULLY SUBMITTED on February 21, 2007.  
7

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BEFORE THE ARIZONA CORPORATION COMMISSION

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**TABLE OF CONTENTS**

	<b>EXECUTIVE SUMMARY .....</b>	<b>iii</b>
<b>I</b>	<b>INTRODUCTION AND QUALIFICATIONS .....</b>	<b>1</b>
<b>II</b>	<b>PURPOSE OF TESTIMONY .....</b>	<b>3</b>
<b>III</b>	<b>REVISED APPLICATION .....</b>	<b>3</b>
<b>IV</b>	<b>STATUS OF WHITE TANKS PLANT .....</b>	<b>3</b>
A	THE MWD PLANT HAS NOT YET BEEN DESIGNED .....	10
B	THE MWD COST "ESTIMATE" IS SERIOUSLY FLAWED .....	10
C	THE MWD PLANT WOULD ONLY BE ABLE TO PROVIDE 10 MGD OF FIRM CAPACITY.....	11
D	THE MWD SCHEDULE IS UNREASONABLY OPTIMISTIC .....	12
E	THE PROPOSED MWD PLANT SITE WOULD REQUIRE ARIZONA-AMERICAN TO CONSTRUCT ADDITIONAL, EXPENSIVE, INTERCONNECTION FACILITIES.....	13
F	ARIZONA-AMERICAN WOULD NOT BE THE OPERATOR OF THE MWD PLANT 14	
G	MWD CANNOT PROVIDE BACK-UP WATER .....	15
H	THE MWD PLANT SITE WOULD EVENTUALLY REQUIRE COSTLY EXPANSION OF THE BEARDSLEY CANAL .....	16
I	MWD HAS NO EXPERIENCE IN DESIGNING, CONSTRUCTING, OR OPERATING POTABLE WATER TREATMENT FACILITIES .....	17
J	MWD HAS NO CUSTOMERS FOR THE MWD PLANT .....	17
K	MWD HAS NO OBLIGATION TO CONSTRUCT A TREATMENT PLANT .....	17

**EXHIBIT**

- JEG-1. Agua Fria Water District Master Plan Schematic
- JEG-2. American Water Surface Water Treatment Plants

**EXECUTIVE SUMMARY**

Joseph E. Gross testifies as follows:

Mr. Gross first sponsors the following sections of the Revised Application.

- Page 3, line 15 – Page 8, line 13;
- Exhibit A; and
- Exhibit B.

A coalition of West Valley CAP contractors (WESTCAPS), including Arizona-American, produced a Regional Water Supply Plan in 2001, which recommended that an 80-mgd surface water treatment facility be constructed within Arizona-American's Agua Fria Water District to serve the District and surrounding communities. Arizona-American committed to take the lead in building and operating a regional treatment facility to provide potable water for its customers and for resale to other members of WESTCAPS. Arizona-American's 2003 Agua Fria Master Plan identified the project parameters and recommended that the Company begin plant construction. Capital funding was approved at the time for land acquisition and engineering design. Land was purchased, RFP's for design-build were solicited, a design-build team was awarded a contract, and design and permitting of the project began in late 2003. Extensive master planning efforts have taken place over the past four years to insure that the infrastructure necessary to distribute the plant's treated water will be in place in a timely manner. Black & Veatch, part of the original design-build team, finalized the White Tanks Plant design for bidding in November 2006.

For the White Tanks Plant, Arizona-American has spent over six million dollars to date for land acquisition, the completed design, permitting, company labor and overhead. Further, Arizona-American has spent over ten million dollars to date on the completed 13-mile north-south water transmission main, which will deliver the treated water from the White Tanks Plant to other transmission mains located throughout the Agua Fria Service Area.

The White Tanks Plant facilities consist of:

- Raw water facilities, including the intake structure, screening, storage basins, and pumping station.
- Water treatment facilities, including mixing, flocculation, dissolved air floatation (DAF) clarification, and filtration.
- Finished water and disinfection facilities, including Ultraviolet light disinfection, chlorination, storage basins and pumping station.
- Residual processing facilities, including DAF solids removal, filter backwash, filter-to-waste system, wastewater clarifiers, return flow pumping, and drying beds.
- Chemical feed and storage facilities.
- Emergency Generator to allow plant to operate in the event of a power outage.

The following schedule is updated from the one contained in Arizona-American's Revised Application:

- |   |                  |  |
|---|------------------|--|
| • | January 30, 2007 | Construction Bids Received                   |
| • | February 2007    | Bid Analysis and Internal Approvals          |
| • | March 19, 2007   | Commission Hearings                          |
| • | May 8, 2007      | Commission Open Meeting                      |
| • | May 9, 2007      | Notice to Proceed to Construction Contractor |
| • | April 30, 2009   | Plant In Service                             |

• October 5, 2009 Final Project Completion

Mr. Gross estimates that the plant will cost \$59.4 million. The plant consists of three process trains of 6.67 mgd each, for a total capacity of 20 mgd. Utilizing common engineering practice, the reliable capacity of the plant would be rated at 13.4 mgd, assuming one train is not in service, either during a backwash cycle or when undergoing media replacement or maintenance. Expansion to a reliable capacity of 20 mgd would only require construction of one additional 6.67-mgd process train. This would bring gross capacity to 26.7 mgd, with a firm capacity rating of 20 mgd. The completed plant design includes space for adding another process train. If a third party could commit by the end of 2007 to using or purchasing sufficient capacity to warrant the expansion, the cost to add one additional 6.67-mgd process train would be approximately two million dollars. This would significantly reduce the White Tanks Plant's per-mgd capacity cost.

Considerable process and project management expertise exists today within American Water's staff in Arizona and at corporate level. The design project manager since the beginning of this project is still on board. He understands the rationale for each aspect of the selected treatment processes and will continue to oversee any design issues needing clarification during construction. American Water's senior construction management person has also tracked this project from the beginning, providing cost-effective constructability reviews and comments. He is currently relocating to Arizona to be the full-time construction manager for this project. Additionally, Mr. Gross has significant experience with major water treatment projects in Scottsdale and will be closely involved in any management-level decisions needed to keep this project on track.

Arizona-American currently owns, maintains, and operates the 7-mgd CAP water treatment plant that supplies treated water to the Anthem community. On February 26, 2007, we began operations for the 3 mgd Cave Creek CAP water treatment plant. Further, we own and operate eight new arsenic treatment facilities in Arizona.

An Arizona-American affiliate (American Water Enterprises) managed construction of the City of Phoenix' brand new 80-mgd CAP water treatment plant and will also operate the plant for the City. This plant is ultimately expandable to 320 mgd. American Water's regulated companies currently operate 79 surface water treatment plants, with a combined treatment capacity of over 1390 million gallons per day. As the owner of these facilities, American Water is involved in all aspects of plant operation, including treating water to meet or surpass required standards, and the repair and replacement of all equipment.

Mr. Gross next responds to the testimony of MWD witness James Albu. He has eleven major concerns with this testimony:

a. **The MWD plant has not yet been designed.**

Without a reasonably final design and approved permitting, it is very difficult, if not impossible, to accurately estimate a project's cost or schedule. At this point, all MWD has is a brief preliminary engineering study.

b. **The MWD cost "estimate" is seriously flawed.**

MWD's costs are estimates made prior to even a conceptual design for the MWD plant. Apparent problems with the cost estimates include:

- No inflation to future years until actual construction.
- Assumption of no changes to the project concept during design or construction.
- Abnormally low construction estimate, if contingencies are included, as stated.
- No land value, currently appraised at \$115,000 per acre, is charged.
- No construction financing costs are included.

- Only \$8 million in engineering and construction administration costs are included, compared to \$14.4 million estimated for same services in the Malcolm Pirnie Final Report of the MWD Water Treatment Plant Planning: Preliminary Engineering Study. ("Preliminary Engineering Study").

**c. The MWD plant would only be able to provide 10 mgd of firm capacity.**

The MWD Treatment Plant would consist of two 10-mgd treatment trains. Utilizing common engineering practice, the reliable capacity of the plant would be rated at just 10 mgd, assuming one clarification train is not in service, due to an unscheduled outage or maintenance requirements. If 20 mgd of capacity were committed equally to two parties and one train went out of service, each party would be left with just 5 mgd of treatment capacity. Losing 5 mgd of an important resource on a hot summer day could certainly present problems for each of the buyers. Further, if MWD actually expects to sell firm capacity, the final design will have to include a back-up treatment train, which is further evidence that MWD's preliminary cost estimate is flawed.

**d. The MWD schedule is unreasonably optimistic.**

The MWD schedule is unreliable because of the conceptual nature of the MWD proposed plant. Without a reasonably final design, it is difficult at best to estimate how long it would take to construct the facility. Further, the Preliminary Engineering Study identifies a number of issues that will need to be addressed before finalizing site selection. Further, MWD has no customers for a plant and has not decided whether to construct a 10-mgd or 20-mgd plant.

One significant scheduling error is the Preliminary Engineering Study's assumption that permitting can begin prior to the start of detailed design and be completed prior to design completion. Permit applications are normally not considered by regulatory agencies prior to 90% completion of plans. Also, Maricopa County normally takes six to eight months to process a Special Use Permit. Then, a County Building Permit is normally not issued for approximately 30 days after approval of the Special Use Permit by the County Board of Supervisors.

**e. The MWD plant site would require Arizona-American to construct additional, expensive, transmission facilities.**

Significant additional costs in transmission system routing would be required if the plant location was changed. The Arizona-American master plan is based on our main water transmission line being routed along Cactus Road to two major booster pump stations. A plant at the proposed MWD site, over two miles south of Cactus Road, would require redundant pipelines to bring the water back north to the Cactus Road alignment. Additional booster pumps may also be required to move the water uphill. A large transmission main to bring the water north to Cactus Road would likely cost in excess of \$6 million in construction costs, if aligned along the Beardsley Canal.

**f. Arizona-American would not be the operator of the MWD plant.**

Arizona-American's Plant design incorporates a centralized instrumentation and control system at the White Tanks Plant, which would also communicate with all the groundwater plants in the Agua Fria service area. This allows Arizona-American to dispatch the Plant's output in coordination with our transmission system and with groundwater production needed to meet peak demands in summer and during canal outages. Managing a coordinated water production, transmission, and distribution system in a geographic area as large as our Agua Fria Water District requires significant expertise and relies on years of institutional knowledge. Arizona-American does not believe that ceding operational control of the regional water plant would be wise, particularly coupled with relocating the instrumentation system needed to coordinate MWD's plant's output with our integrated system. At best, this would require extensive training, operating protocols, and additional equipment expense. At worst, our customer's reliable water deliveries could be jeopardized.



1 **g. MWD cannot provide back-up well water in a timely manner.**

2 Despite its claim, MWD cannot provide back-up water in the event of a plant outage.  
3 MWD's wells are irrigation wells. In order to supply water to treatment plant customers,  
4 several lengthy, costly steps would have to be taken—at the customer's expense. First,  
5 irrigation wells would have to be identified that would not require additional treatment,  
6 other than chlorination. Arsenic, nitrate, and fluoride levels are not issues for irrigation  
7 wells, but are critically important for potable water wells. Second, after a potential  
8 candidate well was identified, it would have to be equipped with a sanitary steel casing,  
9 automated with instrumentation and controls, upgraded with a new pump and motor  
10 capable of meeting distribution line pressures, and provided with a tank for chlorine  
11 contact time. Only then could the well provide drinking water for customers.  
12 Based on our recent experience with converting one MWD well to a potable water well, it  
13 would take 6 - 8 months to identify, permit, and convert one of MWD's irrigation wells  
14 to a potable-water well. Additional pipeline connections would then need to be  
15 constructed to get the water from the converted well to the customer's delivery system.  
16 Repairing or rebuilding a facility in the event of a catastrophic outage would likely take  
17 less time than identifying, permitting, and converting a suitable number of MWD wells to  
18 replace treatment capacity during the outage.

19 **h. The MWD plant site would eventually require costly expansion of the Beardsley**  
20 **Canal.**

21 In the Preliminary Engineering Study, page 3-2, Malcolm Pirnie states: "canal capacity  
22 south of Cactus Road is 50 mgd and will need to be increased if the capacity of the  
23 [Water Treatment Plant] exceeds 50 mgd." MWD's proposed plant site is south of  
24 Cactus Road. This means that MWD will have to expand the canal, which would be a  
25 costly, time consuming process, in order to increase the plant's capacity to over 50 mgd.  
26 By contrast, Arizona-American acquired its site north of Cactus Road, so it will not be  
27 necessary to expand the Beardsley Canal to increase plant capacity up to 80 mgd.

28 **i. MWD has no experience in designing, constructing, or operating major potable**  
29 **water treatment facilities.**

30 **j. MWD has no customers for the MWD plant.**

31 MWD has not committed to build a plant without having first completed contracts with  
32 customers for the capacity.

33 **k. MWD has no obligation to construct a treatment plant.**

34 If MWD were unable to finalize contracts for sufficient capacity to justify building a  
35 treatment plant, it could just decide to focus its efforts in another direction. By contrast,  
36 Arizona-American has identified its own need for its White Tanks Plant and does not  
37 require capacity commitments from any other party to proceed. As soon as the  
38 Commission approves increasing hook-up fees to a level sufficient to proceed, Arizona-  
39 American will award the bid and construction will commence shortly afterward.  
40  
41  
42

**I     INTRODUCTION AND QUALIFICATIONS**

**Q.     PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE  
NUMBER.**

A.     My name is Joseph E. Gross. My business address is 19820 N. 7<sup>th</sup> Street, Suite 201,  
Phoenix, Arizona 85024, and my telephone number is 623-445-2401.

**Q.     BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A.     I am employed by Arizona-American Water Company, Inc. ("Arizona-American" or the  
"Company") as Project Delivery Manager ("Engineering Manager") for Arizona.

**Q.     PLEASE BRIEFLY OUTLINE YOUR RESPONSIBILITIES AS THE  
ENGINEERING MANAGER.**

A.     I am responsible for project delivery of Arizona-American's capital program; first  
providing input to the budgeting process, then providing oversight of the design and  
construction contracts to ensure compliance with assigned budget and schedule. Among  
other things, I supervised design and construction of Arizona-American's arsenic-  
remediation facilities and am now responsible for construction of the White Tanks  
Regional Water Treatment Facility ("White Tanks Plant").

**Q.     DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

A.     I received a Bachelor of Science degree from the United States Military Academy in civil  
engineering in 1962 and a Master of Science degree from the Ohio State University in  
Geodetic Science in 1968.

**Q.     DID YOU SERVE IN THE MILITARY FOLLOWING YOUR GRADUATION  
FROM THE UNITED STATES MILITARY ACADEMY?**

A.     Yes. I served as an officer in the United States Army for 28 years, including 12 months  
in Vietnam as a combat engineer battalion advisor; and 18 months as a battalion

1 commander in the 101<sup>st</sup> Airborne Division. In 1979, I began a number of assignments  
2 with the US Army Corps of Engineers, where I served until retirement in 1990.

3 **Q. HAVE YOU HAD ANY OTHER FORMAL TRAINING?**

4 A. I attended two-week senior executive management training programs at Carnegie Mellon  
5 University in 1986 and at Arizona State University in 1994.

6 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

7 A. I joined Arizona-American in October 2004. I was previously employed by the City of  
8 Scottsdale for fourteen years in the positions of Capital Project Management Director,  
9 Water Campus Project Director, and Water Resources Director. Before that, I had  
10 extensive field-level and executive-level experience in the US Army Corps of Engineers,  
11 including large projects located in the United States, Iran, and Saudi Arabia. Among  
12 other responsibilities, I supervised the Corps' extensive flood-control projects in the  
13 Phoenix metropolitan area from 1979 to 1982. This included the construction of the  
14 Indian Bend Wash flood-control facilities in Scottsdale, construction of Cave Buttes and  
15 Adobe Dams in north Phoenix, and design of the Arizona Canal Diversion Channel.

16 **Q. ARE YOU A REGISTERED PROFESSIONAL ENGINEER?**

17 A. I am a registered Professional Engineer in the states of Arizona and Pennsylvania.

18 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

19 A. I submitted testimony in Arizona-American's arsenic-cost-recovery mechanism  
20 ("ACRM") case for its Agua Fria, Sun City West, and Havasu Water Districts (Docket  
21 No. W-01303A-05-0280, *et. al*). This testimony was adopted by another witness for the  
22 actual hearing. I also filed testimony in Arizona-American's recent Paradise Valley  
23 Water District rate case (Docket No. W-01303A-05-0405) and was examined on March  
24 6, 2006.

**II PURPOSE OF TESTIMONY**

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?**

A. I will be sponsoring certain portions of Arizona-American's Revised Application in this docket. I will also update the Commission on Arizona-American's actions to construct the White Tanks Water Treatment Plant ("White Tanks Plant"). Finally, I will respond to certain portions of the Direct Testimony of James R. Sweeney and James P. Albu on behalf of the Maricopa Water District.

**III REVISED APPLICATION**

**Q. WHICH PORTIONS OF ARIZONA-AMERICAN'S REVISED APPLICATION ARE YOU SPONSORING?**

A. On September 1, 2006, Arizona-American filed its Revised Application in this docket. I am sponsoring the following sections of the Revised Application.

- Page 3, line 15 – Page 8, line 13;
- Exhibit A; and
- Exhibit B.

**IV STATUS OF WHITE TANKS PLANT**

**Q. WHEN DID THE COMPANY FIRST BECOME INVOLVED IN THIS PROJECT?**

A. A coalition of West Valley CAP contractors (WESTCAPS), including Arizona-American, produced a Regional Water Supply Plan in 2001, which recommended that a surface water treatment facility be constructed within Arizona-American's Agua Fria Water District to serve the District and surrounding communities. The study recommended an ultimate reliable capacity of 80 million gallons per day (mgd), based on future water demands of the study area. Arizona-American committed to take the lead in

1 building and operating a regional treatment facility to provide potable water for its  
2 customers and for resale to other members of WESTCAPS.

3 **Q. PLEASE PROVIDE A BRIEF HISTORY OF ARIZONA-AMERICAN'S**  
4 **INVOLVEMENT WITH THE WHITE TANKS PLANT.**

5 A. Arizona-American's 2003 Agua Fria Master Plan identified the project parameters and  
6 recommended that the Company begin plant construction. Capital funding was approved  
7 at the time for land acquisition and engineering design. Land was purchased, RFP's for  
8 design-build were solicited, a design-build team was awarded a contract, and design and  
9 permitting of the project began in late 2003.

10 Arizona-American subsequently entered into negotiations with Maricopa County  
11 Municipal Water Conservation District #1 ("MWD"), which indicated its interest in  
12 funding the construction, and would allow Arizona-American to operate the plant and  
13 deliver water to its customers for a negotiated fee. In May of 2006, negotiations between  
14 Arizona-American and MWD ended. Arizona-American decided to proceed with this  
15 critical construction of the White Tanks Plant by filing for an increase in hookup fees for  
16 the Agua Fria Water District.

17 **Q. IS THE DESIGN FOR THE WHITE TANKS PLANT COMPLETE?**

18 A. Yes. Black & Veatch, part of the original design-build team, finalized the design for  
19 bidding in November 2006.

20 **Q. WHAT FACILITIES ARE INCLUDED IN THE WHITE TANKS PLANT?**

21 A. The facilities designed as part of this project consist of:  
22 • Raw water facilities, including the intake structure, screening, storage basins, and  
23 pumping station.

- 1 • Water treatment facilities, including mixing, flocculation, dissolved air floatation
- 2 (DAF) clarification, and filtration.
- 3 • Finished water and disinfection facilities, including Ultraviolet light disinfection,
- 4 chlorination, storage basins and pumping station.
- 5 • Residual processing facilities, including DAF solids removal, filter backwash, filter-
- 6 to-waste system, wastewater clarifiers, return flow pumping, and drying beds.
- 7 • Chemical feed and storage facilities.
- 8 • Emergency Generator to allow plant to operate in the event of a power outage.

9 **Q. HOW DOES THIS PROJECT FIT INTO THE COMPANY'S MASTER PLAN?**

10 A. Extensive master planning efforts have taken place over the past four years to insure that  
11 the infrastructure necessary to distribute the plant's treated water will be in place in a  
12 timely manner. We have a refined master plan, a schematic of which is attached as  
13 Exhibit JEG-1. The entire master plan is based on the treatment plant location of Cactus  
14 Road and the Beardsley canal, where we have purchased 46 acres. A change in plant  
15 location would require significant changes in existing and planned transmission main  
16 infrastructure; both by the company and by major developers.

17 **Q. HOW MUCH CAPITAL HAS ARIZONA-AMERICAN INVESTED IN THIS**  
18 **PROJECT TO DATE?**

19 A. For the White Tanks Plant, Arizona-American has spent over six million dollars to date  
20 for land acquisition, the completed design, permitting, company labor and overhead.  
21 Further, Arizona-American has spent over ten million dollars to date on the completed  
22 13-mile north-south water transmission main, which will deliver the treated water from  
23 the White Tanks Plant to other transmission mains located throughout the Agua Fria  
24 Service Area.

1 **Q. WHAT IS THE PROJECT SCHEDULE?**

2 A. The following schedule is updated from the one contained in our Revised Application:

- 3       • January 30, 2007       Construction Bids Received  
4       • February 2007       Bid Analysis and Internal Approvals  
5       • March 19, 2007       Commission Hearings  
6       • May 8, 2007       Commission Open Meeting  
7       • May 9, 2007       Notice to Proceed to Construction Contractor  
8       • April 30, 2009       Plant In Service  
9       • October 5, 2009       Final Project Completion

10 Obviously, this schedule is dependent on the timing of the Commission approval process.  
11 With any slippage prior to issuing the Contractor's Notice to Proceed, we will not be able  
12 to meet the April 30, 2009, in-service date.

13 **Q. WHAT ARE YOUR PROJECTED TOTAL COSTS FOR THIS PROJECT?**

14 A. We project a total project cost of \$59.4 million, calculated as follows:

- 15       • Actual Costs to Date:       \$ 06.2 million  
16       • Construction:       \$ 39.3 million  
17       • Canal Intake:       \$ 00.6 million  
18       • Tools, equipment, furnishings:       \$ 00.2 million  
19       • Construction Administration:       \$ 00.5 million  
20       • Technical Review Services:       \$ 01.3 million  
21       • Resident Observation:       \$ 00.6 million  
22       • APS Service Line:       \$ 00.3 million  
23       • Contingencies:       \$ 02.0 million  
24       • Overhead:       \$ 03.3 million  
25       • Construction Financing [AFUDC]:       \$ 05.1 million





1 A. If a third party could commit by the end of 2007 to using or purchasing sufficient  
2 capacity to warrant the expansion, the cost to add one additional 6.67-mgd process train  
3 would be approximately two million dollars. Obviously, this would significantly reduce  
4 the White Tanks Plant's per-mgd capacity cost.

5 **Q. DOES ARIZONA-AMERICAN HAVE THE NECESSARY EXPERTISE TO**  
6 **CONSTRUCT AND OPERATE A SURFACE WATER TREATMENT PLANT?**

7 A. Considerable process and project management expertise exists today within American  
8 Water's staff in Arizona and at corporate level. The design project manager since the  
9 beginning of this project is still on board. He understands the rationale for each aspect of  
10 the selected treatment processes and will continue to oversee any design issues needing  
11 clarification during construction. American Water's senior construction management  
12 person has also tracked this project from the beginning, providing cost-effective  
13 constructability reviews and comments. He is currently relocating to Arizona to be the  
14 full-time construction manager for this project. Additionally, I have significant  
15 experience with major water treatment projects in Scottsdale and will be closely involved  
16 in any management-level decisions needed to keep this project on track.

17 **Q. IS ARIZONA-AMERICAN EXPERIENCED IN OPERATING WATER**  
18 **TREATMENT PLANTS?**

19 A. Certainly. Arizona-American currently owns, maintains, and operates the 7-mgd CAP  
20 water treatment plant that supplies treated water to the Anthem community. On February  
21 26, 2007, we began operations for the 3-mgd Cave Creek CAP water treatment plant.  
22 Further, we own and operate eight new arsenic treatment facilities in Arizona.

1 **Q. WHAT KIND OF EXPERIENCE DOES ARIZONA-AMERICAN'S AFFILIATES**  
2 **HAVE IN CONSTRUCTING AND OPERATING SURFACE WATER**  
3 **TREATMENT PLANTS?**

4 A. An Arizona-American affiliate (American Water Enterprises) managed construction of  
5 the City of Phoenix' brand new 80-mgd CAP water treatment plant and will also operate  
6 the plant for the City. This plant is ultimately expandable to 320 mgd. American  
7 Water's regulated companies currently operate 79 surface water treatment plants, with a  
8 combined treatment capacity of over 1390 million gallons per day. As the owner of these  
9 facilities, American Water is involved in all aspects of plant operation, including treating  
10 water to meet or surpass required standards, and the repair and replacement of all  
11 equipment. Attached as Exhibit JEG-2, is a spreadsheet showing surface water treatment  
12 plants constructed in recent years by American Water companies nationwide.

13 **V. RESPONSE TO MWD**

14 **Q. HAVE YOU REVIEWED THE TESTIMONY OF JAMES ALBU?**

15 A. Yes I have.

16 **Q. HOW DO YOU RESPOND TO MR. ALBU'S TESTIMONY?**

17 A. I have the following major concerns with Mr. Albu's testimony:

- 18 a. The MWD plant has not yet been designed.  
19 b. The MWD cost "estimate" is seriously flawed.  
20 c. The MWD plant would only be able to provide 10 mgd of firm capacity.  
21 d. The MWD schedule is unreasonably optimistic.  
22 e. The MWD plant site would require Arizona-American to construct additional,  
23 expensive, transmission facilities.  
24 f. Arizona-American would not be the operator of the MWD plant.

- 1 g. MWD cannot provide back-up well water in a timely manner.
- 2 h. The MWD plant site would eventually require costly expansion of the Beardsley
- 3 Canal.
- 4 i. MWD has no experience in designing, constructing, or operating major potable water
- 5 treatment facilities.
- 6 j. MWD has no customers for the MWD plant.
- 7 k. MWD has no obligation to construct a treatment plant.
- 8 I will discuss each of these points in order.

9 **A THE MWD PLANT HAS NOT YET BEEN DESIGNED**

10 **Q. WHY DOES IT MATTER THAT THE MWD PLANT HAS NOT YET BEEN**

11 **DESIGNED?**

12 A. Without a reasonably final design and approved permitting, it is very difficult, if not

13 impossible, to accurately estimate a project's cost or schedule. At this point, all MWD

14 has is a brief preliminary engineering study.

15 **B THE MWD COST "ESTIMATE" IS SERIOUSLY FLAWED**

16 **Q. WHAT IS WRONG WITH MWD'S COST ESTIMATE?**

17 A. MWD's costs are estimates made prior to even a conceptual design for the MWD plant.

18 Apparent problems with the cost estimates include:

19 • No inflation to future years until actual construction.

20 • Assumption of no changes to the project concept during design or construction.

21 • Abnormally low construction estimate, if contingencies are included, as stated.

22 • No land value, currently appraised at \$115,000 per acre, is charged.

23 • No construction financing costs are included.

24 • Only \$8 million in engineering and construction administration costs are included,

25 compared to \$14.4 million estimated for same services in the Malcolm Pirnie Final

1 Report of the MWD Water Treatment Plant Planning: Preliminary Engineering Study.  
2 ("Preliminary Engineering Study").

3 **Q. IN APPENDIX 1, MR. ALBU PURPORTS TO COMPARE HIS COST ESTIMATE**  
4 **TO AN ESTIMATE OF THE EXPECTED COST OF ARIZONA-AMERICAN'S**  
5 **WHITE TANKS PLANT. IS THIS COMPARISON VALID?**

6 A. No, for two reasons. First, as I just discussed, the estimated cost of the MWD plant  
7 cannot be relied on. Second, the AAW White Tanks Plant costs shown in Mr. Albu's  
8 Appendix 1 were copied from a three-year old estimate prepared prior to finalizing the  
9 Plant's design and receiving actual plant construction bids.

10 **Q. WHAT IS THE PRESENT BEST ESTIMATE OF ARIZONA-AMERICAN'S**  
11 **COST TO CONSTRUCT THE WHITE TANKS PLANT?**

12 A. The present best estimated total project cost is the \$59.4 million total that I discussed  
13 earlier in my testimony. This is based upon a completed design and actual bids from four  
14 responsible contractors. Also, it is important to note that my estimate includes \$5.1  
15 million in construction financing [AFUDC] costs, which were not included in Mr. Albu's  
16 Appendix 1. Without these costs, the estimate would be \$54.3 million, \$2.4 million less  
17 than the comparable figure stated in Appendix 1.

18 **C THE MWD PLANT WOULD ONLY BE ABLE TO PROVIDE 10 MGD OF**  
19 **FIRM CAPACITY.**

20 **Q. WHAT WOULD BE THE FIRM CAPACITY OF THE MWD TREATMENT**  
21 **PLANT?**

22 A. Based on the Preliminary Engineering Study and MWD's Data Response 4-15, the MWD  
23 Treatment Plant would consist of two 10 mgd treatment trains. Utilizing common  
24 engineering practice, the reliable capacity of the plant would be rated at just 10 mgd,

1 assuming one clarification train is not in service, due to an unscheduled outage or  
2 maintenance requirements.

3 **Q. WHY DOES IT MATTER THAT THE MWD PLANT WOULD ONLY BE ABLE**  
4 **TO PROVIDE JUST 10 MGD OF FIRM TREATMENT CAPACITY?**

5 A. It matters for two reasons. First, if 20 mgd of capacity were committed equally to two  
6 parties and one train went out of service, each party would be left with just 5 mgd of  
7 treatment capacity. Losing 5 mgd of an important resource on a hot summer day could  
8 certainly present problems for each of the buyers. Second, if MWD actually expects to  
9 sell firm capacity, the final design will have to include a back-up treatment train, which is  
10 further evidence that MWD's preliminary cost estimate is flawed.

11 **D THE MWD SCHEDULE IS UNREASONABLY OPTIMISTIC**

12 **Q. HOW IS THE MWD SCHEDULE UNREASONABLY OPTIMISTIC?**

13 A. Fundamentally, the MWD schedule is unreliable because of the conceptual nature of the  
14 MWD proposed plant. Without a reasonably final design, it is difficult at best to estimate  
15 how long it would take to construct the facility. Further, the Preliminary Engineering  
16 Study identifies a number of issues that will need to be addressed before finalizing site  
17 selection. These include public involvement, wildlife and vegetation evaluations, and  
18 cultural and historical investigations. These issues have the potential to seriously derail  
19 any proposed schedule. Further, MWD has no customers for a plant and has not decided  
20 whether to construct a 10-mgd or 20-mgd plant.

21 One significant scheduling error, in my opinion, is the Preliminary Engineering Study's  
22 assumption that permitting can begin prior to the start of detailed design and be  
23 completed prior to design completion. My experience has been that permit applications  
24 are normally not considered by regulatory agencies prior to 90% completion of plans.

1 Also, Maricopa County normally takes six to eight months to process a Special Use  
2 Permit. Then, a County Building Permit is normally not issued for approximately 30  
3 days after approval of the Special Use Permit by the County Board of Supervisors. The  
4 Deputy Director of the Maricopa County Planning and Development Department does  
5 not agree with the MWD claim of exemption from this process, since constructing a  
6 major potable water treatment plant is not incidental to and in furtherance of the primary  
7 purpose of MWD.

8 **Q. WHEN COULD MWD REASONABLY EXPECT TO BRING A TREATMENT**  
9 **PLANT IN SERVICE/**

10 A. Based on the factors that I just discussed, I believe that MWD could not bring a treatment  
11 plant into service before mid-2011 at the earliest. This would miss the primary water  
12 demand period for 2011.

13 **E THE PROPOSED MWD PLANT SITE WOULD REQUIRE ARIZONA-**  
14 **AMERICAN TO CONSTRUCT ADDITIONAL, EXPENSIVE,**  
15 **INTERCONNECTION FACILITIES**

16 **Q. WHY WOULD ARIZONA-AMERICAN HAVE TO CONSTRUCT ADDITIONAL,**  
17 **EXPENSIVE, INTERCONNECTION FACILITIES IF THE PLANT WERE**  
18 **BUILT AT MWD'S PROPOSED SITE?**

19 A. The WESTCAPS study identified a site north of Cactus Road as being best for a regional  
20 water treatment plant site for a number of reasons, including its significantly lower O&M  
21 costs for service to Arizona-American's Agua Fria Water District. Since acquiring the  
22 White Tank Plant site, based on further analysis in our 2003 Master Plan, Arizona-  
23 American's system expansions have been based on receiving treated CAP water from that  
24 location.

1 Significant additional costs in transmission system routing would be required if the plant  
2 location was changed. The Arizona-American master plan is based on our main water  
3 transmission line being routed along Cactus Road to two major booster pump stations. A  
4 plant at the proposed MWD site, over two miles south of Cactus Road, would require  
5 redundant pipelines to bring the water back north to the Cactus Road alignment.  
6 Additional booster pumps may also be required to move the water uphill.

7 **Q. HOW MUCH WOULD IT COST TO INTERCONNECT WITH A TREATMENT**  
8 **PLANT LOCATED AT MWD'S PROPOSED SITE?**

9 A large transmission main to bring the water north to Cactus Road would likely cost in  
10 excess of \$6 million in construction costs, if aligned along the Beardsley Canal. Another  
11 option, depending on the urgency of meeting water demands in 2009, would involve an  
12 interim pipeline to the south costing over \$2 million, to be followed by a multi-million  
13 dollar longer term solution to bring the water back north. Exhibit JEG-1 depicts the  
14 transmission system planned for the Cactus Road alignment. Significant additional costs  
15 to developers would also be necessary if we were to deviate from the planned alignment  
16 of the transmission pipelines.

17 **F ARIZONA-AMERICAN WOULD NOT BE THE OPERATOR OF THE**  
18 **MWD PLANT**

19 **Q. WHY DOES IT MATTER IF ARIZONA-AMERICAN WOULD NOT OPERATE**  
20 **THE REGIONAL TREATMENT FACILITY?**

21 **A.** Arizona-American's Plant design incorporates a centralized instrumentation and control  
22 system at the White Tanks Plant, which would also communicate with all the  
23 groundwater plants in the Agua Fria service area. This allows Arizona-American to  
24 dispatch the Plant's output in coordination with our transmission system and with  
25 groundwater production needed to meet peak demands in summer and during canal

1 outages. Managing a coordinated water production, transmission, and distribution system  
2 in a geographic area as large as our Agua Fria Water District requires significant  
3 expertise and relies on years of institutional knowledge. Arizona-American does not  
4 believe that ceding operational control of the regional water plant would be wise,  
5 particularly coupled with relocating the instrumentation system needed to coordinate  
6 MWD's plant's output with our integrated system. At best, this would require extensive  
7 training, operating protocols, and additional equipment expense. At worst, our customer's  
8 reliable water deliveries could be jeopardized.

9 **G MWD CANNOT PROVIDE BACK-UP WATER**

10 **Q. MR. ALBU CLAIMS THAT MWD COULD SUPPLY GROUNDWATER TO ITS**  
11 **CUSTOMERS IN THE EVENT OF AN "UNFORESEEN OR CATASTROPHIC**  
12 **FAILURE." IS THIS POSSIBLE?**

13 A. The short answer is "no." MWD's wells are irrigation wells. In order to supply water to  
14 treatment plant customers, several lengthy, costly steps would have to be taken—at the  
15 customer's expense. First, irrigation wells would have to be identified that would not  
16 require additional treatment, other than chlorination. Arsenic, nitrate, and fluoride levels  
17 are not issues for irrigation wells, but are critically important for potable water wells.  
18 Second, after a potential candidate well was identified, it would have to be equipped with  
19 a sanitary steel casing, automated with instrumentation and controls, upgraded with a new  
20 pump and motor capable of meeting distribution line pressures, and provided with a tank  
21 for chlorine contact time. Only then could the well provide drinking water for customers.

22 **Q. HOW LONG WOULD IT TAKE TO IDENTIFY A SUITABLE WELL AND**  
23 **CONVERT IT TO A POTABLE WATER WELL?**

24 A. Based on our recent experience with converting one MWD well to a potable water well, I  
25 estimate that it would take 6 - 8 months to identify, permit, and convert one of MWD's



1 irrigation wells to a potable-water well. By comparison, we estimate two years to  
2 construct a new surface water treatment facility. Repairing or rebuilding a facility in the  
3 event of a catastrophic outage would likely take less time than identifying, permitting,  
4 and converting a suitable number of MWD wells to replace treatment capacity during the  
5 outage.

6 **Q. IN THE UNLIKELY EVENT THAT AN MWD CUSTOMER WERE TO DECIDE**  
7 **TO CONVERT MWD IRRIGATION WELLS TO POTABLE WATER WELLS,**  
8 **HOW WOULD THAT WATER BE DELIVERED TO RETAIL CUSTOMERS?**

9 A. That is the fatal flaw. MWD's wells are not connected to any potable water delivery  
10 systems. A treatment customer would have to locate, permit, and construct a delivery  
11 pipeline or pipelines from the well(s) to its water system. This would be a time-  
12 consuming and costly process for receiving service from MWD in the event of an outage.

13 **Q. COULDN'T MWD USE THE BEARDSLEY CANAL TO DELIVER TREATED**  
14 **WATER FOR ITS CUSTOMERS IN THE EVENT OF AN OUTAGE?**

15 A. No. The Beardsley Canal transports raw, untreated CAP water. Any treated water added  
16 to the Canal would have to be retreated before it could be delivered to retail water  
17 customers.

18 **H THE MWD PLANT SITE WOULD EVENTUALLY REQUIRE COSTLY**  
19 **EXPANSION OF THE BEARDSLEY CANAL**

20 **Q. WHY WOULD MWD HAVE TO EVENTUALLY EXPAND THE BEARDSLEY**  
21 **CANAL?**

22 A. In the Preliminary Engineering Study, page 3-2, Malcolm Pirnie states: "canal capacity  
23 south of Cactus Road is 50 mgd and will need to be increased if the capacity of the  
24 [Water Treatment Plant] exceeds 50 mgd." MWD's proposed plant site is south of

1 Cactus Road. This means that MWD will have to expand the canal, which would be a  
2 costly, time consuming process, in order to increase the plant's capacity to over 50 mgd.  
3 By contrast, Arizona-American acquired its site north of Cactus Road, so it will not be  
4 necessary to expand the Beardsley Canal to increase plant capacity up to 80 mgd.

5 **I MWD HAS NO EXPERIENCE IN DESIGNING, CONSTRUCTING, OR**  
6 **OPERATING POTABLE WATER TREATMENT FACILITIES**

7 **Q. ARE YOU AWARE OF ANY EXPERIENCE THAT MWD HAS IN DESIGNING,**  
8 **CONSTRUCTING OR MANAGING POTABLE WATER TREATMENT**  
9 **FACILITIES?**

10 A. No, other than providing potable water for customers of MWD's Lake Pleasant Marina.

11 **J MWD HAS NO CUSTOMERS FOR THE MWD PLANT**

12 **Q. WHY IS IT IMPORTANT THAT MWD DOES NOT HAVE ANY CUSTOMERS**  
13 **FOR ITS PROPOSED PLANT?**

14 A. MWD has not committed to build a plant without having first completed contracts with  
15 customers for the capacity. Indeed, Mr. Albu states (page 7, lines 18-20): "However, I  
16 should note that the size of the first phase needs to be finalized in the next few months or  
17 the schedule may be affected." Presumably, Mr. Albu means that contracts will be  
18 needed for the required capacity to be finalized.

19 **K MWD HAS NO OBLIGATION TO CONSTRUCT A TREATMENT**  
20 **PLANT**

21 **Q. DOES MWD HAVE ANY OBLIGATION TO CONSTRUCT A TREATMENT**  
22 **PLANT?**

23 A. No. If MWD were unable to finalize contracts for sufficient capacity to justify building a  
24 treatment plant, it could just decide to focus its efforts in another direction. By contrast,

1 Arizona-American has identified its own need for its White Tanks Plant and does not  
2 require capacity commitments from any other party to proceed. As soon as the  
3 Commission approves increasing hook-up fees to a level sufficient to proceed, Arizona-  
4 American will award the bid and construction will commence shortly afterward.

5 **Q. DOES THIS CONCLUDE YOUR TESTIMONY IN THIS CASE?**

6 **A. Yes.**

Docket No. W-01303A-05-0718  
Arizona-American Water Company  
Testimony of Joseph E. Gross  
Exhibit JEG-1



Docket No. W-01303A-05-0718  
Arizona-American Water Company  
Testimony of Joseph E. Gross  
Exhibit JEG-2

**American Water Surface Water Treatment Plants**

<b>State</b>	<b>Project</b>	<b>Capacity, MGD</b>	<b>In Service Date</b>
AZ	Lake Pleasant WTP	80	4/7/2007
AZ	Anthem WTP Phase 4	7	4/30/2003
NJ	Delaware River Regional WTP	30	4/1/1996
PA	Yardley WTP	6	12/15/1997
PA	PAWC Huntsville WTP	4.5	12/15/1999
MO	St. Joseph WTP	12	4/1/2000
WV	Fayette WTP	4	12/1/2000
IL	Alton WTP	15	12/31/2001
PA	Norristown WTP	18	6/1/2002
NJ	Oak Glen WTP	10	8/1/2003
PA	Clarion WTP	4	6/1/2004
PA	West Shore WTP	12	4/1/2006

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman  
WILLIAM A. MUNDELL  
MIKE GLEASON  
KRISTIN K. MAYES  
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF  
ARIZONA-AMERICAN WATER COMPANY,  
INC., AN ARIZONA CORPORATION, FOR  
APPROVALS ASSOCIATED WITH A  
PROPOSED TRANSACTION WITH MARICOPA  
COUNTY MUNICIPAL WATER  
CONSERVATION DISTRICT NUMBER ONE TO  
ALLOW THE CONSTRUCTION OF A SURFACE  
WATER TREATMENT FACILITY KNOWN AS  
THE WHITE TANKS PROJECT

DOCKET NO. W-01303A-05-0718

**TESTIMONY  
OF  
THOMAS M. BRODERICK  
ON BEHALF OF  
ARIZONA-AMERICAN WATER COMPANY  
FEBRUARY 21, 2007**



**TESTIMONY  
OF  
THOMAS M. BRODERICK  
ON BEHALF OF  
ARIZONA-AMERICAN WATER COMPANY  
FEBRUARY 21, 2007**

**TABLE OF CONTENTS**

<b>EXECUTIVE SUMMARY .....</b>	<b>iii</b>
<b>I INTRODUCTION AND QUALIFICATIONS .....</b>	<b>1</b>
<b>II PURPOSE OF TESTIMONY .....</b>	<b>2</b>
<b>III REVISED APPLICATION .....</b>	<b>2</b>
<b>IV SUMMARY OF ARIZONA-AMERICAN'S REQUEST.....</b>	<b>3</b>
<b>V TESTIMONY OF JAMES R. SWEENEY .....</b>	<b>9</b>
A ARIZONA-AMERICAN CAN FUND THE WHITE TANKS PLANT .....	9
B MWD'S PROPOSAL WOULD CAUSE A MAJOR RATE INCREASE .....	11
C MWD'S LANDOWNER CREDIT SUGGESTION REQUIRES MORE DETAIL .....	13
<b>VI OFFER TO SELL WHITE TANKS PLANT SHARE .....</b>	<b>14</b>
<b>VII RESPONSE TO DEVELOPER TESTIMONY.....</b>	<b>15</b>
<b>VIII CONCLUSION.....</b>	<b>17</b>



**EXECUTIVE SUMMARY**

Thomas M. Broderick first sponsors the following sections of the Revised Application.

- Page 1, line 1 – Page 3, line 14;
- Page 8, line 14 – Page 13 line 18;
- Exhibit C;
- Exhibit D; and
- Exhibit E.

Mr. Broderick next discusses Arizona-American's requests in this case. We ask that the Commission:

1. Increase the Water Facilities Hook-Up Fees applicable in the Company's Agua Fria Water District in accordance with one of two options.
2. Issue an Accounting Order to keep Arizona-American whole on the excess of capital expenses above hook-up fees.
3. Order Arizona-American to file, as part of its 2008 Agua Fria Rate Filing, a revised Water Facilities Hook-Up Fee proposal based on the best information known at that time.
4. Order Arizona-American to file, as part of its 2008 Agua Fria Rate Filing, for approval of a proposed mechanism, similar to the Commission's ACRM procedure, to defer and subsequently recover operation and maintenance expense for the White Tanks Plant incurred until such expenses can be placed in base rates.

In response to intervenor testimony in this case, we are now also asking the Commission to:

5. Approve a formula to reduce the Water Facilities Hook-Up Fees in the event Arizona-American is able to either:
  - a. Sell a share of the White Tanks Plant to a third party; and/or
  - b. Execute a long-term contract with a third party for a share of the White Tanks Plant.

Mr. Broderick next discusses hook-up fees. In its Agua Fria District, Arizona-American is currently charging homebuilders a Water Facilities Hook-Up Fee of only \$1,150 for 5/8 x 3/4-inch meters, \$1,750 for 3/4-inch meters, \$2,875 for one-inch meters, and so forth for larger meters. This is substantially less than builders are now paying in similarly growing areas in Maricopa County

For Option 1, Arizona-American proposes to increase its hook-up fee to the same level as the rate-base reduction fee in effect for its Anthem Water District, which begins at \$3,000 for a 5/8 x 3/4 inch meter. At these levels, the White Tanks Plant would be fully funded in late 2013 based on current forecasts.

For Option 2 Arizona-American proposes to reset the Water Facilities Hook-Up Fees to levels anticipated to be sufficient to fund the White Tanks Plant in the year it enters service – 2009. This hook-up fee would start at \$4,700 for a 5/8 x 3/4-inch meter.

Mr. Broderick next discusses what the Company is asking for in an accounting order. First, the order should provide Arizona-American the ability to accrue post-in-service AFUDC on the unfunded balance of the White Tanks Plant investment. This will keep Arizona-American whole on its investment until accumulated hook-up fees are sufficient to fund the entire Plant balance. Even with Option 2, there is an expected shortage at plant completion between capital expenses and accumulated hook-up fees. And if growth is less than expected, this shortage would be larger and last longer. The additional post-in-service AFUDC would later be completely offset by hook up fees.

1 Second, the order should provide that collected hook-up fees will not be considered to be  
2 contributions for ratemaking purposes until some corresponding eligible plant enters service.  
3 Because CWIP is not typically included in rate base, the contribution balance would otherwise  
4 grow far faster than rate base, thereby causing rate base to decline significantly in the next rate  
5 case, only to then bounce back as the plant entered service.  
6

7 Mr. Broderick next discusses two other things that Arizona-American is asking the Commission  
8 to order concerning its planned May 2008 rate filing.  
9

10 First, order Arizona-American to propose to adjust the Water Facilities Hook-Up Fees based on  
11 information known to that date including:

- 12 • Actual to-date and remaining plant costs;
- 13 • The effects of any third-party treatment contracts;
- 14 • Actual hook-up fee collections;
- 15 • Revised projected customer additions and meter preferences; and
- 16 • Future Agua Fria district capital requirements.  
17

18 Second, order Arizona-American to propose a mechanism, similar to the Commission's ACRM  
19 procedure, to defer and subsequently recover operation and maintenance costs associated with  
20 the White Tanks Plant until such expenses can be included in base rates. The Company  
21 estimates that these O&M costs will be approximately \$1.5 million per year, based on current  
22 media, electricity, and other costs.  
23

24 At the end of this section of his testimony, Mr. Broderick discusses Arizona-American's new  
25 fifth request – that the Commission approve a formula to reduce the water facilities hook-up fees  
26 if the Company sells or otherwise commits White Tanks Capacity. Mr. Broderick explains the  
27 formula and provides a numerical example.  
28

29 Mr. Broderick next discusses the October 27, 2006, Staff Report in this docket and states that  
30 Arizona-American accepts the recommendations made by Staff.  
31

32 In the next section of his testimony, Mr. Broderick responds to the testimony of MWD witness  
33 James Sweeney.  
34

35 First, he assures the Commission that Arizona-American, as part of the largest private water  
36 company in the United States will be able to obtain financing for the White Tanks Plant, despite  
37 recent disappointing Arizona financial results. However, this will require reducing regulatory  
38 lags by funding the project with hook-up fees. The Commission has approved similar  
39 mechanisms at least three other times for Arizona-American in the recent past.  
40

41 Arizona-American's proposal would not require a rate increase, in contrast to purchasing  
42 capacity from an MWD-owned facility, which would cause a rate increase. Purchasing capacity  
43 from MWD would also further degrade Arizona-American's financial health.  
44

45 Mr. Broderick next turns to MWD's idea of a landowner credit through Arizona-American's  
46 bills. He explained that MWD would have to provide much more detail before he could  
47 adequately respond to it.  
48

49 In the next section of his testimony Mr. Broderick provides details of Arizona-American's offer  
50 to sell up to 10 mgd of plant capacity to MGD or another party, such as an investor-owned utility  
51 or a municipal water utility.

1 The White Tanks Plant is designed to easily accommodate an additional 6.5 mgd filter train,  
2 which would bring total, firm capacity to 20 mgd. Capital costs, whether sunk or ongoing,  
3 would be shared in proportion to ownership shares. Fixed O&M costs would also be split in  
4 proportion to ownership shares. Variable O&M costs would be split in proportion to monthly  
5 usage. Arizona-American will operate the White Tanks Plant in coordination with Arizona-  
6 American's other water production, transmission, and distribution facilities.

7  
8 Mr. Broderick concludes by addressing various concerns raised by developers in their testimony  
9

10 Developers were concerned with plant delay. Arizona-American should be able to put the White  
11 Tanks Plant into service in mid 2009, most likely two years before MWD could put a treatment  
12 plant into service.

13  
14 Developers also expressed concern with the size of the proposed hook-up fees. As demonstrated  
15 in Arizona-American's Revised Application and in Mr. Brilz' testimony on behalf of Pulte  
16 Homes, this fee would not be out of line with hook-up or impact fees charged by West Valley  
17 municipal water providers. Further, the Commission recently approved a rate-base reduction  
18 tariff for Arizona-American's Anthem Water District, which applies to all new connections and  
19 starts at \$3,000 for 5/8 x 3/4-inch meters. The Anthem rate-base reduction tariff is on top of a  
20 \$765 per equivalent residential unit capacity reservation charge. Further, the hook-up fee could  
21 go down in two circumstances. First, as discussed above, Arizona-American is asking the  
22 Commission to approve a formula to automatically reduce the Agua Fria Water Facilities Hook-  
23 Up Fee when a party irrevocably commits to purchase capacity or signs a long-term, take-or-pay  
24 treatment contract that allows Arizona-American to recover its capital costs associated with the  
25 associated capacity. This formula would be incorporated into the tariff and be applied shortly  
26 after a filing providing the details of the sale/commitment. Second, Arizona-American has  
27 agreed to update the hook-up fee assumptions as part of its 2008 rate filing, so that the  
28 Commission can make any necessary adjustments to the hook-up fee amounts.

29  
30 Developers were also concerned about when the hook-up fee increase should be applied.  
31 Arizona-American believes that the new hook-up fee should be applicable if the tariff is effective  
32 prior to operational acceptance under the terms of line extension agreements. This is equivalent  
33 to the meter-set date. This is exactly how a similar tariff in Anthem is applied.

**I     INTRODUCTION AND QUALIFICATIONS**

**Q.     PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE  
NUMBER.**

A.     My name is Thomas M. Broderick. My business address is 19820 N. 7<sup>th</sup> Street, Suite  
201, Phoenix, Arizona 85024, and my business phone is 623-445-2420.

**Q.     IN WHAT CAPACITY AND BY WHOM ARE YOU EMPLOYED?**

A.     I am Manager, Rates & Regulatory Affairs for American Water, Western Region.  
Arizona-American Water Company ("Arizona-American" or the "Company") is a  
wholly-owned subsidiary of American Water.

**Q.     PLEASE DESCRIBE YOUR PRIMARY RESPONSIBILITIES FOR THE  
COMPANY.**

A.     I manage water and wastewater rate cases in Arizona and Texas including overall  
responsibility for interactions with the Arizona Corporation Commission ("Commission")  
and I co-manage community relations in Arizona.

**Q.     PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND  
EDUCATION.**

A.     For more than 20 years before joining the Company in 2004, I held various management  
positions in the electric-utility industry with responsibilities for regulatory and  
government affairs, corporate economics, planning, load forecasting, finance and  
budgeting with Arizona Public Service Company, PG&E National Energy Group and  
Energy Services, and the United States Agency for International Development. I was  
employed at APS for nearly 14 years as Supervisor, Regulatory Affairs, then Supervisor,  
Forecasting, and then Manager, Planning. I was designated APS' Chief Economist in the  
early 1990's. For PG&E National Energy Group, I was Director, Western Region -  
External Relations. For USAID, I was Senior Energy Advisor to Ukraine.

I have a Masters Degree in Economics from the University of Wisconsin – Madison and a Bachelors Degree in Economics from Arizona State University.

**Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

A. Yes, on many occasions.

**II PURPOSE OF TESTIMONY**

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?**

A. I will first sponsor certain portions of Arizona-American's Revised Application in this docket. I will then summarize Arizona-American's request. Next, I will discuss the Staff Report in this docket. I will next respond to certain portions to the Direct Testimony of James R. Sweeney on behalf of the Maricopa Water District. I will also discuss a new offer that Arizona-American is making to sell MWD a portion of the White Tanks Water Treatment Plant ("White Tanks Plant"). Finally, I will respond to certain portions of testimony filed by developer intervenors.

**III REVISED APPLICATION**

**Q. WHICH PORTIONS OF ARIZONA-AMERICAN'S REVISED APPLICATION ARE YOU SPONSORING?**

A. On September 1, 2006, Arizona-American filed its Revised Application in this docket. I am sponsoring the following sections of the Revised Application.

- Page 1, line 1 – Page 3, line 14;
- Page 8, line 14 – Page 13 line 18;
- Exhibit C;
- Exhibit D; and
- Exhibit E.

**IV SUMMARY OF ARIZONA-AMERICAN'S REQUEST**

**Q. WHAT IS ARIZONA-AMERICAN REQUESTING IN THIS CASE?**

A. Arizona-American's requests are straightforward. We ask that the Commission:

1. Increase the Water Facilities Hook-Up Fees applicable in the Company's Agua Fria Water District in accordance with one of two options.
2. Issue an Accounting Order to keep Arizona-American whole on the excess of capital expenses above hook-up fees.
3. Order Arizona-American to file, as part of its 2008 Agua Fria Rate Filing, a revised Water Facilities Hook-Up Fee proposal based on the best information known at that time.
4. Order Arizona-American to file, as part of its 2008 Agua Fria Rate Filing, for approval of a proposed mechanism, similar to the Commission's ACRM procedure, to defer and subsequently recover operation and maintenance expense for the White Tanks Plant incurred until such expenses can be placed in base rates.

In response to intervenor testimony in this case, we are now also asking the Commission to:

5. Approve a formula to reduce the Water Facilities Hook-Up Fees in the event Arizona-American is able to either:
  - a. Sell a share of the White Tanks Plant to a third party; and/or
  - b. Execute a long-term contract with a third party for a share of the White Tanks Plant.

**Q. HOW DO ARIZONA-AMERICAN'S CURRENT AGUA FRIA HOOK-UP FEES COMPARE TO THOSE PAID IN OTHER AREAS?**

A. In its Agua Fria District, Arizona-American is currently charging homebuilders a Water Facilities Hook-Up Fee of only \$1,150 for 5/8 x 3/4-inch meters, \$1,750 for 3/4-inch meters, \$2,875 for one-inch meters, and so forth for larger meters. This is substantially

1 less than builders are now paying in similarly growing areas in Maricopa County. For  
2 example, in the City of Peoria, the current water hook-up fee for 3/4 and one-inch meters  
3 is \$3,497. The City of Surprise is proposing new development fees for Water Resources  
4 (\$3,447) and Drinking Water System (\$3,500) totaling \$6,955 for new-home residential  
5 water customers with 3/4-inch meters. Finally, in Decision No. 68857, the Commission  
6 approved a rate-base reduction tariff for Arizona-American's Anthem Water District.  
7 This tariff applies to all new connections and starts at \$3,000 for 5/8 x 3/4-inch meters.  
8 The rate-base reduction tariff is on top of a \$765 per equivalent residential unit capacity  
9 reservation charge.

10 **Q. PLEASE DESCRIBE OPTION 1 TO INCREASE HOOK-UP FEES.**

11 A. For Option 1, Arizona-American proposes to increase its hook-up fee to the same level as  
12 the rate-base reduction fee in effect for its Anthem Water District. Exhibit B lists by year  
13 each capital project that is currently eligible for recovery through funds generated by the  
14 Agua Fria Water Facilities Hook-Up Fee. The 13.5 MGD White Tanks Plant is listed in  
15 the first row, with the total cost equal to the \$67,325,000 estimated at that time in Exhibit  
16 A. Total projected capital expenditures for eligible projects, including the White Tanks  
17 Plant, equals \$132,892,655.

18 Exhibit C is a spreadsheet that projects Water Facilities Hook-Up Fee collections and  
19 offsets collections against the eligible water projects listed in Exhibit B. Essentially,  
20 anticipated hook-up fee collections at existing tariffs will only be enough to fund existing  
21 projects. If the White Tanks Plant is built with no increase in hook-up fees, there will be  
22 a financing requirement in excess of \$70,000,000, which consequentially would have to  
23 be funded through increased rates.

24 Option 1 is shown on Exhibit D. It resets the Water Facilities Hook-Up Fees to the level  
25 recently approved by the Commission for Arizona-American's Anthem Water District.

1 At these levels, the White Tanks Plant would be fully funded in late 2013 based on  
2 current forecasts.

3 **Q. WHAT IS OPTION 2 FOR HOOK UP FEES?**

4 A. Option 2 is shown on Exhibit E. It resets the Water Facilities Hook-Up Fees to levels  
5 anticipated to be sufficient to fund the White Tanks Plant in the year it enters service –  
6 2009. This hook-up fee would start at \$4,700 for a 5/8 x 3/4-inch meter.

7 **Q. WHAT IS ARIZONA-AMERICAN ASKING FOR IN AN ACCOUNTING**  
8 **ORDER?**

9 A. First, the order should provide Arizona-American the ability to accrue post-in-service  
10 AFUDC on the *unfunded* balance of the White Tanks Plant investment. This will keep  
11 Arizona-American whole on its investment until accumulated hook-up fees are sufficient  
12 to fund the entire Plant balance. Even with Option 2, there is an expected shortage at  
13 plant completion between capital expenses and accumulated hook-up fees. And if growth  
14 is less than expected, this shortage would be larger and last longer.

15 The additional post-in-service AFUDC would later be completely offset by hook up fees.

16 Second, the order should provide that collected hook-up fees will not be considered to be  
17 contributions for ratemaking purposes until some corresponding eligible plant enters  
18 service. Because CWIP is not typically included in rate base, the contribution balance  
19 would otherwise grow far faster than rate base, thereby causing rate base to decline  
20 significantly in the next rate case, only to then bounce back as the plant entered service.

21 **Q. WHAT ARE THE TWO THINGS THAT ARIZONA-AMERICAN IS ASKING**  
22 **THE COMMISSION TO ORDER CONCERNING THE COMPANY'S PLANNED**  
23 **MAY 2008 RATE FILING?**



1 A. First, order Arizona-American to propose to adjust the Water Facilities Hook-Up Fees  
2 based on information known to that date including:

- 3 • Actual to-date and remaining plant costs;
- 4 • The effects of any third-party treatment contracts;
- 5 • Actual hook-up fee collections;
- 6 • Revised projected customer additions and meter preferences; and
- 7 • Future Agua Fria district capital requirements.

8 Second, order Arizona-American to propose a mechanism, similar to the Commission's  
9 ACRM procedure, to defer and subsequently recover operation and maintenance costs  
10 associated with the White Tanks Plant until such expenses can be included in base rates.  
11 The Company estimates that these O&M costs will be approximately \$1.5 million per  
12 year, based on current media, electricity, and other costs.

13 While it is Arizona-American's plan to entirely fund the capital cost portion of this  
14 project with hook-up fees, we do reserve the right in a future rate case to update our plan  
15 to include a portion of the project in base rates. If for some reason hook-up fee receipts  
16 are disappointingly low – perhaps due to slow growth – we may seek to have a portion of  
17 the project funded in base rates or funded as part of an ACRM-like surcharge.

18 **Q. PLEASE DISCUSS ARIZONA-AMERICAN'S NEW FIFTH REQUEST – THAT**  
19 **THE COMMISSION APPROVE A FORMULA TO REDUCE THE WATER**  
20 **FACILITIES HOOK-UP FEES IF IT SELLS OR OTHERWISE COMMITS**  
21 **WHITE TANKS CAPACITY.**

22 A. As discussed below, Arizona-American is offering to sell up to 10 mgd of White Tanks  
23 capacity to MWD or to any other party. This would reduce the amount of capital that  
24 Arizona-American would need to commit to the plant for this phase and thereby enable a  
25 reduction in the otherwise required level of hook-up fees.

1 **Q. WHEN WOULD THE FORMULA BE APPLIED?**

2 A. The formula would be applied immediately to reduce hook-up fees when a party  
3 irrevocably commits to purchase capacity or signs a long-term, take-or-pay treatment  
4 contract that allows Arizona-American to recover its associated capital costs.

5 **Q. WHAT IS THE FORMULA?**

6 A. The formula follows:

7 
$$\text{Adjusted HUF} = \text{New HUF} - 0.75 [(\text{New HUF} - \text{Current HUF}) * (1 - \text{AAW Cap/Plant Cap})]$$

8 Where:

9 **Adjusted HUF** = Reduced Agua Fria Water Facilities Hook-up Fee

10 **New HUF** = Agua Fria Water Facilities Hook-up Fee approved by the ACC as per this  
11 application

12 **Current HUF** = Current Agua Fria Water Facilities Hook-up Fee

13 **AAW Cap** = Arizona-American's share of total White Tanks Plant capacity

14 **Plant Cap** = Total White Tanks Plant capacity

15 **0.75** = AAW Incentive Adjustment

16 **Q. COULD YOU PROVIDE A NUMERICAL EXAMPLE?**

17 A. Certainly. Let's assume that the White Tanks Plant is constructed with a capacity of 20  
18 mgd. Assume also that MWD buys 9 MGD and Arizona Water signs a long-term 1-mgd  
19 treatment agreement. The current hook-up fee for a 5/8-inch meter is \$1150. Finally we  
20 will assume that the Commission has set the new hook-up fee for a 5/8-inch meter at  
21 \$3200. In this example the adjusted hook-up fee for a 5/8-inch meter would be calculated  
22 as follows:

23 **Adjusted HUF** =  $\$3200 - 0.75 [(\$3200 - \$1150) * (1 - 0.5)]$

24 =  $\$3200 - 0.75 [\$2050 * 0.5]$

25 =  $\$3200 - \$768.25$

= \$2431.25

**Q. WHAT IS THE AAW INCENTIVE ADJUSTMENT?**

A. It's a component of the proposed formula intended to provide Arizona-American an incentive to secure capacity agreements so that the amount and duration of shortage in capital expenses as compared to hook-up fees is reduced. Even though the accounting order would keep Arizona-American whole, AFUDC is nevertheless lesser quality non-cash earnings. By applying the incentive adjustment, Arizona-American would recover its capital costs somewhat earlier than if the Adjusted Hook-Up Fee reflected the entire amount of the capacity sale or commitment.

**Q. HAVE YOU REVIEWED THE OCTOBER 3, 2006, STAFF REPORT IN THIS DOCKET?**

A. Yes.

**Q. PLEASE SUMMARIZE THE STAFF REPORT?**

A. Staff recommended approval of a new Agua Fria Water Facilities Hook-Up Fee for a 5/8-inch meter of \$3,280, with increasing fees for larger meters as set forth in Schedule JJD-1. Staff also recommended that the Commission approve post-in-service AFUDC on the unfunded balance of the White Tanks Plant capital costs and hook-up fees not be treated as contributions until the Plant enters service. Finally, Staff recommended that Arizona-American update the hook-up fee assumptions as part of its 2008 rate filing so that the Commission could make any necessary adjustments to the hook-up fee amounts.

**Q. WHAT IS ARIZONA-AMERICAN'S REACTION TO THE STAFF REPORT?**

A. Arizona-American accepts the recommendations made by Staff.

1 **Q. DID STAFF EVALUATE ARIZONA-AMERICAN'S PROPOSED FORMULA TO**  
2 **REDUCE HOOK-UP FEES IF IT SUCCESSFULLY SELLS OR OBTAINS**  
3 **LONG-TERM COMMITMENTS FOR WHITE TANKS CAPACITY?**

4 A. No. This proposal is new with this testimony. I ask Staff to also recommend approval of  
5 the adjustment formula, which can be directly incorporated into the tariff. In other  
6 words, to change the hook-up fee pursuant to a capacity sale or commitment would  
7 merely require a filing by Arizona-American of the sale/commitment followed by a short  
8 period for Staff/intervenor review without further action by the Commission, except, of  
9 course, if it had a concern with some aspect of the sale/commitment.

10 **V TESTIMONY OF JAMES R. SWEENEY**

11 **Q. HAVE YOU REVIEWED THE TESTIMONY OF JAMES SWEENEY?**

12 A. Yes.

13 **Q. DO YOU HAVE ANY RESPONSES TO HIS TESTIMONY?**

14 A. Yes. I would like to address two issues raised in various MWD pleadings or in Mr.  
15 Sweeney's testimony. First, I would like to assure the Commission that Arizona-  
16 American can secure the funds to construct the White Tanks Plant. We borrow from our  
17 financing affiliate, American Water Capital Corporation. Second, I would like to address  
18 the likely rate impact of MWD's proposal to construct a treatment plant and sell  
19 treatment services to Arizona-American. Third, I address MWD's Landowner Credit  
20 concept.

21 **A ARIZONA-AMERICAN CAN FUND THE WHITE TANKS PLANT**

22 **Q. CAN ARIZONA-AMERICAN OBTAIN FUNDING FOR THE WHITE TANKS**  
23 **PLANT?**

24 A. Yes. It is certainly true, as I have stated in many forums, that Arizona-American's  
25 financial results have been very disappointing for the past three years. Arizona's

1 regulatory construct often creates multi-year regulatory lag which is a significant  
2 disincentive toward making discretionary investments, especially when a company is  
3 unprofitable at the time of starting a large project.

4 Fortunately, Arizona-American is part of the largest private water company in the United  
5 States, American Water. It is my understanding that American Water prefers we either  
6 fund this project quickly through contributions as we have proposed or obtain CWIP in  
7 rate base from the onset. Given that the Commission re-opened the previous rate case for  
8 the Agua Fria district and recently approved a surcharge related rate increase associated  
9 with completion of arsenic plant, we concluded that a request for CWIP in rate base  
10 would probably not be well received by the Commission.

11 American Water prefers we not undertake this project on a traditional basis as there  
12 would be significant financing requirements during construction at a time when the  
13 Commission requests we bring our equity ratio to at least 40% and there would likely be  
14 multi-year regulatory lag after the plant is placed in service.

15 By funding the White Tanks Plant with hook-up fee funds and obtaining the requested  
16 accounting orders, Arizona-American can reduce downward pressure on its equity ratio  
17 and minimize regulatory lag and successfully fund the White Tanks Plant. I think its  
18 commendable that an Arizona utility is willing to build such a significant facility on a  
19 contributed plant basis – essentially foregoing the profit potential.

20 Arizona-American's overall cost of capital remains the lowest of all major Arizona  
21 utilities.

22 **Q. HAS THE COMMISSION PREVIOUSLY APPROVED REQUESTS BY**  
23 **ARIZONA-AMERICAN THAT HAVE REDUCED REGULATORY LAG?**

24 **A.** Yes. I can think of at least three major examples:

- 1           1. The present Agua Fria Water Facilities Hook-Up Fees were approved in 2003 and
- 2           have been used to fund \$12.2 million in new plant in the Agua Fria Water District as
- 3           of the end of 2006.
- 4           2. Arizona-American has successfully utilized the Commission's ACRM procedure to
- 5           begin earlier the recovery of over \$ 45 million in new arsenic-treatment facilities, all
- 6           of which have entered service within the last 11 months.
- 7           3. In its Paradise Valley Water District, the Commission included post-test-year plant in
- 8           rate base and approved innovative conservation and public safety surcharges to fund
- 9           approximately \$15 million in new investment to increase system pressure and
- 10          capacity, and thereby upgrade the system's ability to respond to fire emergencies with
- 11          water from fire hydrants.

12   **Q.   HOW CAN CUSTOMERS BE SURE THAT HOOK-UP FEE FUNDS WILL BE**  
13   **USED TO FUND CAPITAL IMPROVEMENTS AND NOT FOR SOME OTHER**  
14   **PURPOSE?**

15   **A.**   In Decision No. 66512, dated November 10, 2003, the Commission ordered that Arizona-  
16   American would continue "to maintain all water and wastewater hook-up fees in a  
17   separate interest bearing account, and to file annual reports" on the collection and uses of  
18   the funds. Arizona-American recently filed its compliance report for 2006 just like for  
19   years 2003, 2004, and 2005. These filings show the details behind the receipts and  
20   application of the funds to projects. The Commission would have another opportunity to  
21   review this information in our January 2008 filing for the year 2007. We are not asking  
22   to change that requirement.

23   **B       MWD'S PROPOSAL WOULD CAUSE A MAJOR RATE INCREASE**

24   **Q.   WHY WOULD MWD'S PROPOSAL CAUSE A RATE INCREASE?**

1 A. If MWD were to build a treatment plant and Arizona-American were to contract for  
2 treatment from MWD, there would be an on-going revenue requirement associated with  
3 the capital cost recovery component of MWD's treatment charge based on the reasonable  
4 assumption that the hook-up fee would not be increased to establish a long-term fund to  
5 pay future contract expenses.

6 By contrast, because the plan is for White Tanks Plant's capital costs to be entirely  
7 funded by hook-up fees under the Company's proposal, the plant cost would be offset by  
8 an equal contribution balance and the intent is there would be no associated revenue  
9 requirement on the capital portion.

10 **Q. HOW MUCH WOULD RATES HAVE TO INCREASE IF ARIZONA-**  
11 **AMERICAN WERE TO PURCHASE TREATMENT SERVICES FROM MWD?**

12 A. I don't know exactly as MWD has not provided any pricing and while I have their plant  
13 cost estimate, I don't have a handle on their cost of capital or depreciation expense. I  
14 hope MWD will provide this information very soon. MWD also has provided us no  
15 information on its proposed Landowner Credit concept.

16 **Q. WOULDN'T THERE BE A RATE INCREASE REQUIRED TO RECOVER**  
17 **ASSOCIATED O&M EXPENSES?**

18 A. Yes, but that is common to both MWD's and Arizona-American's proposals.

19 **Q. IN ADDITION TO AVOIDING/MINIMIZING A RATE INCREASE FOR AGUA**  
20 **FRIA WATER CUSTOMERS, ARE THERE ANY OTHER REASONS WHY THE**  
21 **MWD PROPOSAL IS LESS DESIRABLE?**

22 A. Yes. There would very likely be significant regulatory lag associated with obtaining rate  
23 recovery of the costs associated with purchasing treatment services from MWD which  
24 Arizona-American and its parent prefers to avoid or minimize. To obtain this rate

1 increase, Arizona-American would have to prepare, file, and successfully prosecute a rate  
2 case. We would have to demonstrate that the capital recovery charge is known and  
3 measurable and so there is a risk that the Commission might not accept these charges as a  
4 post test year adjustment or even allow annualization of charges contained in a portion of  
5 a test year with the result that the Company's shareholder would end up funding these  
6 treatment charges for a period of time just like we have with so many other charges in  
7 recent years. Finally, without knowing more about MWD's proposal and undertaking a  
8 great deal of analysis, Arizona-American cannot be certain that a transaction with MWD  
9 would not be treated as a capital lease.

10 **C MWD'S LANDOWNER CREDIT SUGGESTION REQUIRES MORE**  
11 **DETAIL**

12 **Q. WHAT IS THE COMPANY'S POSITION CONCERNING MWD'S PROPOSED**  
13 **LANDOWNER CREDIT?**

14 **A.** I presently do not have enough information to assess this proposal and do not consider  
15 this an active request in this proceeding. Our silence should not be interpreted as  
16 acceptance. I presently do not have any information on how this credit would be  
17 calculated, administered or how it would interface with Arizona-American's billing  
18 systems. I have a vague understanding that MWD would like to provide financial  
19 benefits from MWD's undertakings as approved by MWD's Board to its landowners via  
20 a line item in Arizona-American's water bills. It is my understanding that the financial  
21 benefits might be in excess of MWD's margin on this water treatment project. If MWD  
22 is seriously interested in buying/committing to a portion of our proposed facility, I  
23 recommend they provide much more detail on their Landowner Credit concept in the  
24 course of this proceeding as I also have not analyzed the requirements, if any, for  
25 Commission approval for such a credit on my customers' bills.



**VI OFFER TO SELL WHITE TANKS PLANT SHARE**

**Q. IS ARIZONA-AMERICAN WILLING TO SELL A SHARE OF THE WHITE TANKS TO MWD?**

A. Yes; Arizona-American is willing to sell up to 10 mgd of plant capacity to MGD or another party, such as an investor-owned utility or a municipal water utility.

**Q. HOW WOULD ARIZONA-AMERICAN SHARE WHITE TANKS PLANT CAPACITY WITH ANOTHER ENTITY?**

A. The purchaser(s) and Arizona-American would each own an undivided percentage interest in the plant and the plant site. Conceptually, this would be no different than how Arizona electric utilities own percentage shares of power plants, such as the Palo Verde and Four Corners generating stations.

**Q. ARIZONA-AMERICAN IS CURRENTLY PLANNING TO BUILD A 13.5 MGD TREATMENT FACILITY. IS ARIZONA-AMERICAN WILLING TO INCREASE THE SIZE OF THE FACILITY TO ACCOMMODATE THE NEEDS OF A PURCHASER?**

A. Yes. As Mr. Gross testifies, the White Tanks Plant is designed to easily accommodate an additional 6.5 mgd filter train, which would bring total, firm capacity to 20 mgd. This needs to occur through a change order before the end of 2007.

**Q. HOW WOULD PLANT COSTS BE SHARED?**

A. Capital costs, whether sunk or ongoing, would be shared in proportion to ownership shares. Fixed O&M costs would also be split in proportion to ownership shares. Variable O&M costs would be split in proportion to monthly usage.

**Q. WHO WOULD OPERATE THE WHITE TANKS PLANT?**

1 A. As Mr. Gross testifies, Arizona-American will operate the White Tanks Plant in  
2 coordination with Arizona-American's other water production, transmission, and  
3 distribution facilities.

4 **Q. WOULD ARIZONA-AMERICAN BE WILLING TO WHEEL TREATED**  
5 **WATER FOR OR ON BEHALF OF A CO-OWNER?**

6 A. Arizona-American can presently provide some capacity on its main north-south trunkline.  
7 However, a major co-owner will need to begin planning to design, permit, and build its  
8 own trunkline. The co-owners will also need to execute some kind of coordination/usage  
9 agreement covering the operation of the two trunklines.

10 **VII RESPONSE TO DEVELOPER TESTIMONY**

11 **Q. WHAT SORT OF CONCERNS DID THE DEVELOPERS RAISE IN THEIR**  
12 **TESTIMONY?**

13 A. Generally the developers were concerned with four things:  
14 1. Prompt construction of a regional water treatment facility;  
15 2. The magnitude of the proposed hook-up fee increase;  
16 3. Retroactive application of any hook-up fee increase; and  
17 4. Avoiding a possible future hook-up "moratorium."

18 I will discuss the first three concerns. Mr. Troy Day discusses the fourth concern in his  
19 testimony.

20 **Q. WILL ARIZONA-AMERICAN BE ABLE TO PROMPTLY BUILD THE WHITE**  
21 **TANKS PLANT?**

22 A. Mr. Gross testifies that Arizona-American should be able to put the White Tanks Plant  
23 into service in mid 2009, most likely two years before MWD could put a treatment plant  
24 into service.

1 **Q. IS THE AMOUNT OF THE PROPOSED HOOK-UP FEE EXCESSIVE?**

2 A. No. So that my answer is clear, I am referring to the Staff's proposed Agua Fria Water  
3 Facilities Hook-Up Fee for a 5/8-inch meter of \$3,280, with increasing fees for larger  
4 meters as set forth in Schedule JJD-1. As demonstrated in Arizona-American's Revised  
5 Application and in Mr. Brilz' testimony on behalf of Pulte Homes, this fee would not be  
6 out of line with hook-up or impact fees charged by West Valley municipal water  
7 providers. Further, the Commission recently approved a rate-base reduction tariff for  
8 Arizona-American's Anthem Water District, which applies to all new connections and  
9 starts at \$3,000 for 5/8 x 3/4-inch meters. The Anthem rate-base reduction tariff is on top  
10 of a \$765 per equivalent residential unit capacity reservation charge.

11 **Q. COULD THE HOOK-UP FEE GO DOWN?**

12 A. Yes, in two circumstances. First, as discussed above, Arizona-American is asking the  
13 Commission to approve a formula to automatically reduce the Agua Fria Water Facilities  
14 Hook-Up Fee when a party irrevocably commits to purchase capacity or signs a long-  
15 term, take-or-pay treatment contract that allows Arizona-American to recover its capital  
16 costs associated with the associated capacity. This formula would be incorporated into  
17 the tariff and be applied shortly after a filing providing the details of the  
18 sale/commitment. Second, Arizona-American has agreed to update the hook-up fee  
19 assumptions as part of its 2008 rate filing, so that the Commission can make any  
20 necessary adjustments to the hook-up fee amounts.

21 **Q. WHEN SHOULD THE HOOK-UP FEE BE APPLIED?**

22 A. The hook-up fee is applicable if the tariff is effective prior to operational acceptance  
23 under the terms of line extension agreements. This is equivalent to the meter-set date.  
24 This is exactly how a similar tariff in Anthem is applied.

1 **VIII CONCLUSION**

2 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

3 A. Yes. Arizona-American's requested relief is reasonable, in the public interest, and should  
4 be approved. Approval will allow construction of a regional surface water treatment  
5 plant, which will allow much of the future demand in Arizona-American's service  
6 territory to be served by renewable surface water, thereby reducing future groundwater  
7 usage. Our offer to sell capacity to MWD should meet its needs, and will allow MWD to  
8 market treatment capacity two years earlier than if it were to construct its own facility.  
9 Developers should be pleased because Arizona-American is:

- 10 • Accepting Staff's hook-up fee levels;  
11 • Providing a formula to automatically reduce hook-up fee levels;  
12 • Agreeing that the hook-up fee increases should apply at the time of meter set; and  
13 • Proceeding toward putting a regional water treatment plant in service by 2009.

14 This is a proposal that works for customers, developers, MWD, and Arizona-American.

15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY IN THIS CASE?**

16 A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman  
WILLIAM A. MUNDELL  
MIKE GLEASON  
KRISTIN K. MAYES  
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF  
ARIZONA-AMERICAN WATER COMPANY,  
INC., AN ARIZONA CORPORATION, FOR  
APPROVALS ASSOCIATED WITH A  
PROPOSED TRANSACTION WITH MARICOPA  
COUNTY MUNICIPAL WATER  
CONSERVATION DISTRICT NUMBER ONE TO  
ALLOW THE CONSTRUCTION OF A SURFACE  
WATER TREATMENT FACILITY KNOWN AS  
THE WHITE TANKS PROJECT

DOCKET NO. W-01303A-05-0718

TESTIMONY  
OF  
G. TROY DAY  
ON BEHALF OF  
ARIZONA-AMERICAN WATER COMPANY  
FEBRUARY 21, 2007

**TESTIMONY  
OF  
G. TROY DAY  
ON BEHALF OF  
ARIZONA-AMERICAN WATER COMPANY  
FEBRUARY 21, 2007**

**TABLE OF CONTENTS**

<b>EXECUTIVE SUMMARY .....</b>	<b>iii</b>
<b>I INTRODUCTION AND QUALIFICATIONS.....</b>	<b>1</b>
<b>II PURPOSE OF TESTIMONY .....</b>	<b>2</b>
<b>III LONG-TERM WATER SUPPLIES.....</b>	<b>2</b>

**EXHIBIT**

**EXECUTIVE SUMMARY**

Troy Day testifies that:

Arizona-American has developed a Master Plan for providing long-term water service in its Agua Fria Water Certificate of Convenience and Necessity "(CC&N)." Each developer must execute a line extension agreement ("LXA"), which governs exactly which water facilities a developer must construct before receiving water service. Each LXA includes exhibits, which detail all required water distribution, supply, storage, and transmission facilities for the new development.

When Arizona-American determines that the increased demand associated with the development will exceed what Arizona-American can supply to the area, it will require the developer to provide enough water, typically from new wells, to meet the incremental demand. If the water quality and quantity meets the standards set forth in the LXA, Arizona-American accepts the well and the developer deeds the well to Arizona-American. If the developer cannot provide acceptable water supplies, then Arizona-American will not set new meters until the developer can live up to its obligation under the LXA. This protects existing water customers from a future water shortage caused by new customers' demand.

Actual well delivery quantities may be disappointing. Further, water quality may be unacceptable without, or even with, expensive treatment. In these cases Arizona-American has been forced to postpone setting water meters until the developer can provide the required water necessary to meet the demand of their development. As the District has developed toward the south and west, new well yields and water quality have been inconsistent and disappointing. It is getting more difficult and expensive for developers to provide ground water to support their developments.

It is unlikely that Arizona-American would have to actually go to the Commission to request a moratorium. If Arizona-American continues to vigorously enforce its LXAs, we should be able to avoid that last resort. If a developer can provide the required water, Arizona-American will continue to set meters and take on new customers in the development. However, if the water supplies are not delivered, Arizona-American will continue to refuse to set meters until the supplies are delivered. The ability to provide adequate water resources is becoming more difficult and more expensive.

Arizona-American will still need well supplies, even after a regional treatment facility comes on line. We must be able to supply our customers, even if the plant is off-line, whether during planned or unexpected outages. Wells are also necessary to meet peak demands in the high use summer months. Further, Arizona-American's CAP allotment is only part of our overall resource portfolio, and cannot be delivered everywhere in the Agua Fria District. Well supplies will continue to be needed. However, fewer wells will be needed from developers once the White Tanks Plant is on line.

As the Agua Fria District builds out, Arizona-American will need to obtain additional surface water supplies, as well as additional well-water supplies.

**I     INTRODUCTION AND QUALIFICATIONS**

**Q.     PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TELEPHONE  
NUMBER.**

A.     My name is Troy Day. My business address is 19820 N. 7<sup>th</sup> Street, Suite 201, Phoenix,  
Arizona 85024 and my business phone is 623-445-2420.

**Q.     IN WHAT CAPACITY AND BY WHOM ARE YOU EMPLOYED?**

A.     I am the Production Director for American Water, Western Region. Arizona-American  
Water Company ("Arizona-American" or the "Company") is a wholly-owned subsidiary  
of American Water.

**Q.     PLEASE DESCRIBE YOUR PRIMARY RESPONSIBILITIES FOR THE  
COMPANY.**

A.     I guide the Western Region's capital improvement program to ensure Arizona and Texas  
Operations facilities comply with American Water standards, as well as all regulatory  
requirements. I direct the implementation of standards of practice, policies, and business  
plans to ensure operational efficiency and effectiveness. I ensure water and wastewater  
operations meet the required standards and are in compliance with all regulatory  
requirements.

**Q.     PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND  
EDUCATION.**

A.     Previously, I served as the Director of Water Quality for American Water. I came to  
American Water from the Arizona Department of Environmental Quality, where I  
managed numerous programs including water permits and water quality standards.  
Before that I worked as a Hydrologist for the Arizona Department of Water Resources. I  
am a graduate of Arizona State University, where I studied Geology.



1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

2 A. No.

3 **II PURPOSE OF TESTIMONY**

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?**

5 A. I will discuss Arizona-American's requirement that a developer must agree in a line  
6 extension agreement to provide long-term water supplies for a new development in our  
7 Agua Fria Water District, and the consequences if the developer cannot fulfill these  
8 obligations.

9 **III LONG-TERM WATER SUPPLIES**

10 **Q. WHAT MUST A DEVELOPER PROVE BEFORE IT CAN DEVELOP A**  
11 **PROJECT IN ARIZONA-AMERICAN'S AGUA FRIA CERTIFICATE OF**  
12 **CONVENIENCE AND NECESSITY?**

13 A. The developer must prove that it has a 100-year assured water supply.

14 **Q. WHAT DOES ARIZONA-AMERICAN REQUIRE FROM A DEVELOPER**  
15 **BEFORE IT CAN PROVIDE WATER SERVICE TO A NEW DEVELOPMENT?**

16 A. Arizona-American has developed a Master Plan for providing long-term water service in  
17 its Agua Fria Water Certificate of Convenience and Necessity "(CC&N)." Each  
18 developer must execute a line extension agreement ("LXA"), which governs exactly  
19 which water facilities a developer must construct before receiving water service. Each  
20 LXA includes exhibits, which detail all required water distribution, supply, storage, and  
21 transmission facilities for the new development.

22 **Q. WHEN WILL ARIZONA-AMERICAN REQUIRE A DEVELOPER TO PROVIDE**  
23 **A WELL OR ANOTHER SOURCE OF SUPPLY?**

1 A. When Arizona-American determines that the increased demand associated with the  
2 development will exceed what Arizona-American can supply to the area, it will require  
3 the developer to provide enough water, typically from new wells, to meet the incremental  
4 demand. To compensate for the cost of the facilities, Arizona-American will typically  
5 credit the developer toward the hook-up fees for the development.

6 **Q. WHAT HAPPENS AFTER A DEVELOPER DRILLS AND OUTFITS A WELL?**

7 A. If the water quality and quantity meets the standards set forth in the LXA, Arizona-  
8 American accepts the well and the developer deeds the well to Arizona-American.

9 **Q. WHAT HAPPENS IF A DEVELOPER CANNOT PROVIDE ACCEPTABLE**  
10 **WATER SUPPLIES?**

11 A. If the developer cannot provide acceptable water supplies, then Arizona-American will  
12 not set new meters until the developer can live up to its obligation under the LXA. This  
13 protects existing water customers from a future water shortage caused by new customers'  
14 demand.

15 **Q. HAS A DEVELOPER EVER BEEN UNABLE TO PROVIDE WATER WHEN**  
16 **EXPECTED IN THE LXA?**

17 A. Yes. Hydrology is not an exact science. Actual well delivery quantities may be  
18 disappointing. Further, water quality may be unacceptable without, or even with,  
19 expensive treatment. In these cases Arizona-American has been forced to postpone  
20 setting water meters until the developer can provide the required water.

21 **Q. WHAT HAS BEEN THE RECENT TREND FOR WATER QUANTITY AND**  
22 **QUALITY FROM RECENT WELLS IN THE AGUA FRIA CC&N?**

1 A. As the District has developed toward the south and west, new well yields and water  
2 quality have been disappointing. It is getting more difficult and expensive for developers  
3 to provide ground water to support their developments.

4 **Q. ARIZONA-AMERICAN RAISED THE ISSUE OF A POTENTIAL**  
5 **MORATORIUM ON NEW SERVICE CONNECTIONS IN 2009, IF THE WHITE**  
6 **TANKS PLANT IS NOT BUILT. CAN YOU DISCUSS THIS ISSUE?**

7 A. Yes. I can certainly see why developers would be concerned about such a moratorium. I  
8 think it is unlikely that Arizona-American would have to actually go to the Commission  
9 to request a moratorium. If Arizona-American continues to vigorously enforce its LXAs,  
10 we should be able to avoid that last resort. If a developer can provide the required water,  
11 Arizona-American will continue to set meters and take on new customers in the  
12 development. However, if the water supplies are not delivered, Arizona-American will  
13 continue to refuse to set meters until the supplies are delivered.

14 **Q. DOES THIS MEAN THAT DEVELOPERS WILL NOT NEED TO PROVIDE**  
15 **WATER SUPPLIES ONCE THE WHITE TANKS PLANT IS ON-LINE?**

16 A. No, for two reasons. One, Arizona-American has to be able to supply its customers, even  
17 if the plant is off-line, whether during planned or unexpected outages. This will always  
18 require well supplies. Second, Arizona-American's CAP allotment is only part of our  
19 overall resource portfolio, and cannot be delivered everywhere in the Agua Fria District.  
20 Well supplies will continue to be needed. However, fewer wells should be needed from  
21 developers once the White Tanks Plant is on line.

22 **Q. ARE ARIZONA-AMERICAN'S SURFACE WATER SUPPLIES SUFFICIENT TO**  
23 **SUPPLY ITS AGUA FRIA DISTRICT?**

24 A. No. As the Agua Fria District builds out, Arizona-American will need to obtain  
25 additional surface water supplies, as well as additional well-water supplies.

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY IN THIS CASE?**

2 A. Yes.